UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte ROBERT J. BLOCK, JAMES G. HANKO,
and J. KENT PEACOCK

_____

Appeal 2007-2244
Application 09/513,015
Technology Center 2100

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Decided: January 22, 2008

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Before MAHSHID D. SAADAT, JEAN R. HOMERE,
and SCOTT R. BOALICK, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

    Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's
Final Rejection of claims 1-5, 7, 8, and 17-28, which constitute all of the
claims pending in this application as claims 6 and 9-16 have been canceled.
We have jurisdiction under 35 U.S.C. § 6(b).

    Appellants invented a method and apparatus for making a
computational service available in a multiple server computer environment
by implementing server redundancy and Desktop Unit (DTU) redirection in
a server failure situation (Specification 6). According to Appellants, if a

server fails, the failure is detected and the invention switches the DTUs

using that server to another server (Specification 7).

Independent Claim 1 is exemplary and reads as follows:

1. A method of making a computational service available in a multiple server computing environment comprising:

exchanging information between a plurality of servers;

initiating a connection between a client unit and a first server of said plurality of servers;

determining a most recently accessed session of a plurality of sessions on said plurality of servers;

determining at said first server a location of said most recently accessed session on one of said plurality of servers; and

redirecting said client unit via said first server to a second server of said plurality of servers having said most recently accessed session;

wherein each of said plurality of sessions comprises a plurality of services requested by said client unit;

wherein said first and second servers can each provide said plurality of services;

wherein said plurality of services comprise state maintenances for a user of said client unit;

wherein redirecting is executed when said first server fails to respond to said client unit with a message, the message indicating availability of said first server, and said redirecting of said client unit to said second server maintains access to said accessed session while continuing said plurality of services to said client unit so as to eliminate a single point failure.

The Examiner relies on the following prior art in rejecting the claims:

Dean   US 6,023,762   Feb. 8, 2000

Narendran   US 6,070,191   May 30, 2000

Andresen et al. (Andresen), "SWEB: Toward a Scalable World Wide Web Server on Multicomputers," Dept. of Computer Science, Univ. of California, 1996, pp. 1-7.

Lotus IBM (IBM), "High Availability and Scalability with Domino Clustering and Partitioning on AIX," 1998.

Claims 1-5, 7, 8, and 17-27 stand rejected as being unpatentable under 35 U.S.C. § 103(a) over Narendran, Andresen, and IBM.

Claim 28 stands rejected as being unpatentable under 35 U.S.C. § 103(a) over Narendran, Andresen, IBM, and Dean.

Rather than repeat the arguments here, we make reference to the Briefs and the Answer for the respective positions of the Appellants and the Examiner.

We reverse.

ISSUE

To show that the Examiner erred in rejecting the claims under 35 U.S.C. § 103(a), Appellants argue that the claimed "determining a most recently accessed session of a plurality of sessions on said plurality of servers" is not taught by Andresen and cannot result from the combination of the references (Br. 6-8). Therefore, the issue on appeal turns on whether a preponderance of the evidence before us shows that under 35 U.S.C. § 103,

the combination of the applied prior art teaches or suggests the claimed subject matter and specifically *a most recently accessed session*.

FINDINGS OF FACT

The following findings of fact (FF) are relevant to the issue involved in the appeal and are believed to be supported by a preponderance of the evidence.

1.   Narendran relates to server systems used for processing client requests received over communications networks and to server-side techniques for processing client requests in a server system (col. 1, ll. 6-10). The system includes a set of N document servers and one or more redirect servers which receive HTTP requests from clients and redirect requests to the document servers in accordance with pre-computed redirection probabilities (col. 2, ll. 61-65).

2.   As shown in Figure 1, server system 10 includes a round-robin domain name service (DNS) server 12, a pair of redirection servers 14-1 and 14-2, and a cluster 16 of N document servers $S_1, S_2, \ldots S_N$ interconnected as shown (col. 3, ll. 59-62).

3.   Narendran further discloses that, for example, a client may generate an HTTP request for a particular service hosted by the server system 10, such as a request for information associated with a particular web site, and a TCP/IP connection is then established between the client and a particular one of the document servers 16 (col. 4, ll. 5-10).

4.   The round-robin DNS 12 of server system 10 multiplexes client requests among the redirection servers 14-1, 14-2 such that a single

redirection server does not become a bottleneck. Other types of DNS techniques may also be used. The redirection servers 14-1, 14-2 redirect the incoming client requests to a document server S_i that maintains the requested document (col. 4, ll. 41-47) when a server fails (col. 12, ll. 12-18).

     5.   Andresen[1] similarly relates to directing simultaneous access requests on a multi-component system (Abstract). Using a DNS caching a local DNS system caches the name-to-IP address mapping so that the most recently accessed hosts can quickly be mapped (p. 1, right hand col.).

     6.   Andresen further discloses that processing HTTP requests, a client sets up a TCP/IP connection on a server which sends back the result of the query after which the connection is closed by either the client or the server (p. 2, left-hand col.).

     7.   Appellants' Specification defines "session" as a "representation of those services which are executing on behalf of a user at any point in time" (Specification 22:6-8).

PRINCIPLES OF LAW

     The examiner bears the burden of establishing a prima facie case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed.Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 1445 (Fed.Cir. 1992). Only if this burden is met does the burden of coming forward with rebuttal argument or evidence shift to the applicant. *Rijckaert*, 9 F.3d at 1532. When the references cited by the examiner fail to establish a prima facie case of obviousness, the rejection is

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[1] Narendran cites Andresen (col. 1, l. 45 through col. 2, l. 4) for its redirection decision based on a dynamic scheduling (col. 1, ll. 57-59), but finds problem with limited increase in throughput and the need to go over the network for fetching the document (col. 2, ll. 1-3).

improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. *See In re Kahn*, 441 F.3d 977, 987-988 (Fed. Cir. 2006), *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991) and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).

Further, a rejection based on section 103 must rest upon a factual basis rather than conjecture, or speculation. "Where the legal conclusion [of obviousness] is not supported by the facts it cannot stand." *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967). *See also In re Kahn*, 441 F.3d at 988.

ANALYSIS

Appellants argue that the Examiner's characterization of the term "a most recently accessed session" as Andresen's "most recently accessed hosts" is in error since a session is defined in the Specification to comprise "a plurality of services requested by said client unit" (Br. 7). Appellants further argue that Andresen's DNS caching is cited in Narendran, but is identified as problematic for causing failures (Br. 8).

The Examiner responds that page 22 of Appellants' Specification provides the definition of the claimed term "session" as a representation of services executed on behalf of the user and characterizes the multi-

workstation HTTP server of Andresen as a service producer associated with a session (Ans. 10). The Examiner further asserts that the term "most recently accessed session" has actually been interpreted as the "most recently accessed host providing a service to the user" (Ans. 11).

Appellants assert that Andresen uses a connection (i.e., session) for processing an HTTP request to access HTML information, which is terminated or closed upon completion of the request, leaving no access to the terminated connection (Rep. Br. 3). Appellants conclude that in Andresen, the connection established for processing a client's HTTP requests for HTML data is terminated and any reference to that connection is lost (Rep. Br. 4). Additionally, Appellants argue that even if the terminated connection in Andresen is the *de facto* most recently accessed session, it would be impossible to attempt to "determine a location of" or "maintain access to" the terminated connection (Rep. Br. 4-5).

Upon a review of the teachings in the prior art relied on by the Examiner, we find that Appellants correctly point out, and the Examiner acknowledges (Ans. 11), that *the most recently accessed host* of Andresen is not the same as the claimed "most recently accessed session." We also agree with Appellants that, even if Andresen's connection through which the HTTP request is passed may be equated to a "session," the connection is terminated upon processing the user's HTTP request (FF 5-6); making it impossible to determine a location of or maintain access to such terminated session. While the last accessed host or the terminated connection in Andresen may also comprise the last access session (FF 6-7), Appellants correctly argue (Rep. Br. 5) that it would be impossible to determine a

location of the session, redirect the client to the server having that session, and maintain access to the session.

We also disagree with the Examiner that since throughput problems are not discussed in Narendran (Ans. 12-17), using the redirection schedule disclosed by Andresen in combination with the data distribution technique of Narendran is not discouraged. Narendran in fact redirects the requests to a server with a copy of the document based on the corresponding redirect probability (FF 1). In that regard, Appellants correctly recognize the problem with combining the references given the discussed absence of any correspondence between the terminated connection or session in Andresen (FF 6) and the redirected request in Narendran (FF 4). Other than Appellants' own disclosure and using hindsight reconstruction, we fail to see how and in what manner the disclosure of Narendran might have been modified by Andresen to arrive at the claimed subject matter.

We have also reviewed the IBM reference which the Examiner applied to address the redirecting/scheduling capabilities required by the claimed invention. We find nothing, however, in the disclosure of IBM which overcomes the innate deficiencies of Narendran and Andresen discussed *supra*.

In view of the discussion made above, since we are of the opinion that the proposed combination of references set forth by the Examiner does not support the obviousness rejection, we cannot sustain the 35 U.S.C. § 103 rejection of independent claim 1, nor of claims 2-5, 7, 8, and 17-27 dependent thereon, over Narendran, Andresen, and IBM.

With respect to the rejection of claim 28, we note that the Examiner further relies on Dean for teaching the additional feature of initiating connection between a client and a server by inserting a token into said client unit. Claim 28, similar to claim 1, requires "determining a most recently accessed session" and "redirecting of said client unit to said second server" while access to said accessed session is maintained. However, the Examiner has not pointed to any additional teachings or convincing rationale in modifying the combination of Narendran, Andresen, and IBM with the teachings of Dean that would have overcome the deficiencies of the applied prior art as discussed above with respect to claim 1. We, therefore, find that the proposed combination of the applied prior art fails to provide all the claimed features and cannot support finding claim 28 unpatentable for obviousness under 35 U.S.C. § 103 over Narendran, Andresen, IBM, and Dean.

<div align="center">DECISION</div>

The decision of the Examiner rejecting claims 1-5, 7, 8, and 17-28 under 35 U.S.C. § 103 is reversed.

REVERSED

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